BILL NO. S-85-06-43 1 SPECIAL ORDINANCE NO. S-AN ORDINANCE approving City Utilities 3 Purchase Order #A-44712 by the City of Fort Wayne, Indiana, by and through its Department of Purchasing and En-4 gineered Fiberglass Products for the 5 Street Light Engineering Department. 6 7 NOW, THEREFORE, BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF FORT WAYNE, INDIANA: 8 SECTION 1. That City Utilities Purchase Order #A-44712 9 between the City of Fort Wayne, by and through its City Utilities, 10 and the Department of Purchasing and Engineered Fiberglass Products, 11 12 for the Street Light Engineering Department, respectfully for: the awarding of a bid with respect to the purchase of fiberglass light poles 13 for the Street Light Engineering De-14 partment; 15 involving a total cost of Eleven Thousand Five Hundred Sixty-Seven 16 and 50/100 Dollars (\$11,567.50), all as more particularly set 17 forth in said Purchase Order, which is on file in the Office of 18 the Department of Purchasing, and is by reference incorporated 19 herein, made a part hereof, and is hereby in all things ratified, 20 confirmed and approved. 21 SECTION 2. That this Ordinance shall be in full force 22 and effect from and after its passage, and any and all necessary 23 approval by the Mayor. 24 25 26 Councilmember 27 APPROVED AS TO FORM AND LEGALITY 28 29 30 Bruce O. Boxberger, City Attorney 31

32

seconded b	Read the	first time	in full and	duly adopted,	read the	second time
Plan Commi	ission f	or recommen	dation) and	Public Hearing	to be ne	ld after
due legal Indiana, o	notice,	at the Cou	the	cs, City-County	•	day of
		6-25	, 19	, at	7	kM., E.S
Ι	DATE:	6 23	-03	SANDRA E. KEN	NEDY, CIT	Y CLERK
I	Read the	third time	in full and	d on motion by_	Hen	uj.
seconded has passage.		(EOST)	by the follow	_, and duly add owing vote:	opted, pla	ged on its
		AYES	NAYS	ABSTAINED	ABSENT	TO-WIT:
TOTAL VOTE	ES	8		-		
BRADBURY			Accessed to the last of the la			
BURNS						
EISBART						
GiaQUINTA						
HENRY						
REDD		_				
SCHMIDT						
STIER					Manthematical	,
TALARICO						
DAT	E:	7-9-85-		SANDRA E. KEN		1
		2 - 2	her the Comm			
				on Council of		or rort
				opriation) ((	1	12281
		ING MAP) O		/ /	,	C
on the	7		day of	Luly		19 05,
SANDRA E.	ha f	TTEST: Leunedy, CITY CLE	RK .	PRESIDING OF	Ja Sur FICER	inta
	Presente	ed by me to	the Mayor o	f the City of	Fort Wayne	e, Indiana,
				Trely "		, 19 SJ-,
at the ho	our of _	1/=	30 0'cl	ock	M., E.S.T.,	
				Sandra	f. Len	nedy
				SANDRA E. KE	NNEDY, CI	TY CLERK
	Approve	d and signe	d by me this	/the day of_	July	
				o'clock	0	
				esette 1	R., MAXOR	

FORM FWPO-1 APPROVED BY THE STATE BOARD OF ACCOUNTS FOR CITY UTILITIES AND CIVIL CITY OF FORT WAYNE 1980

Section 1981

#### City of Fort Wayne

DEPARTMENT OF PURCHASES NUMBER ONE EAST MAIN STREET, ROOM 940 FORT WAYNE, IN 46802

MAIL ALL CORRESPONDENCE, CLAIM VOUCHERS, ETC., TO:

STREET LIGHTING WAREHOUSE 1703 S. LAFAYETTE STREET

IN

100

ENGINEERED FIBERGLASS PRODUCTS

P. O. BOX 815 ESTILL

FORT WAYNE

SC 29918

46803

and the search of the sample of the

DELIVER TO: DEPART-MENT OR DIVISION

CASH DISCOUNT TERMS

STREET LIGHTING WAREHOUSE 1703 S. LAFAYETTE STREET FORT WAYNE IN 46803 PURCHASE ORDER NUMBER

A - .44712

06/18/85 DATE

00053 REQ. NO.

THE ABOVE INFORMATION MUST APPEAR ON ALL INVOICES, BILLS OF LADING, DELIVERY TICKETS, PACKAGES AND CORRESPONDENCE.

**INVOICE IN DUPLICATE** 

CIVIL CITY

**CITY UTILITIES** 

APPROPRIATION STATE STATE OF S

U044712 CM

ANTITY RDERED	UNIT	MATERIALS, SUPPLIES OR SERVICES	UNIT PRICE	AMOUNT
50	EA	*001 TAX EXEMPT (UNLESS OTHERWISE INDICATED) PER SPECIFICATION IN BID \$750	231.35	11567.50
		28' + OVERALL LENGTH FIBERGLASS LIGHT POLE FOR 25' + MOUNTING HGT.		
		SUBJECT TO COUNCILMANIC APPROVAL: ORDINANCE NO: DATE:		
		DHIE.		ederate a
		A CONTRACTOR OF THE STATE OF TH	is the same of	
				6 K
		MATION: PURCHASING PARTIES 219-427-1101	TOTAL	11567.5
		UNLESS OTHERWISE INDI- NOTE UNLES	S OTHERWISE INDICATED, RICES SHOWN DO NOT IN-	

COMPLIANCE WITH THE DELIVERY DATE RE-QUESTED WILL AVOID "FOLLOW UP" CORRE-SPONDENCE.

UNLESS OTHERWISE INDI-CATED THE PRICES SHOWN INCLUDE ALL CHARGES FOR DELIVERY, PACKING, ETC., NECESSARY TO COM-PLETE DELIVERY TO DES-TINATION SPECIFIED.

NOIE

READ INSTRUCTIONS ON THE BACK OF THIS ORDER

THE CONTRACTOR OR VENDOR, BY ACCEPTING THIS ORDER, AGREES TO THE GENERAL CONDITIONS AND TERMS OF AGREEMENT ON THE BACK OF THIS OR-

CLUDE TAXES OF ANY KIND.

EXEMPTION BLANKS WILL BE FURNISHED WHEN NECESSARY. BE

INDIANA SALES TAX EXEMPTION CERTIFICATE NUMBER 034508-03

IF THIS ORDER DOES NOT AGREE WITH YOUR QUO-TATION KINDLY RETURN IT WITH AN EXPLANA-

I HEREBY CERTIFY THAT THE COST OF THE ABOVE PURCHASE IS FULLY COVERED BY UNENCUMBERED BALANCES IN THE ABOVE FUNDS AND THAT THE EXPENDITURE THEREFORE HAS BEEN DULY AUTHORIZED AND APPROPRIATED.

I HEREBY CERTIFY UPON MY OWN PERSONAL KNOWLEDGE THAT THIS ORDER IS AUTHORIZED BY A PROPERLY EXECUTED AND APPROVED REQUISITION ON FILE IN THIS OFFICE.

CITY CONTROLLER

DIRECTOR OF PURCHASES

DER

DED

BID REFERENCE #750 FIBERGLASS POLES STREET LIGHTING TABULATION

	PRICE PER EACH	TOTAL	DELIVERY TIME
SHAKESPEARE (Electronics & Fiberglass Div.):	\$327.42	\$16,371.00	8 Weeks
ENGINEERED FIBERGLASS PRODUCTS, INC.:	\$217.37	\$10,868.50	6-8 Weeks
ENGINEERED FIBERGLASS PRODUCTS (Alternate):	\$231.35	\$11,567.50 6-8 Weeks	6-8 Weeks

Address	Quotationa, materials, so as shown be indicated be indicated be received and since, etc. to a ROOM 9  RED FO ment sision 17	subject to the conditions on the reverse hereof, are requested on the following list of applies, equipment or services, for the department as mentioned, with delivery to destination show. Quotations shall include all charges for delivery, packing, etc. Address your reply as low.  Carol Offerle  DEPARTMENT OF PURCHASES  440, ONE MAIN STREET, FORT WAYNE, IN 46802 (219)427-1101  PREET LIGHTING WAREHOUSE  701 SOUTH LAFAMENTE ST.	Ref. No.  Date Ma  Date was  Fund	v 15,198	5
Closing	RN ORIG	ORT WAYNE, IN 46803  GINAL TO THE CITY — RETAIN DUPLICATE COPY FOR YOUR FILL  JUNE 4, 1985 at 10:00 a.m.  TY IS EXEMPT FROM FEDERAL EXCISE AND INDIANA STATE SALES TAX THE CITY'S INDIANABLE IS NO. MADOS. PRICES SHOULD NOT INCLUDE THESE TAXES. See "Instructions to Bidders"  TAX EXEMPT (Unless otherwise indicated)		S TAX EXEM	PTION for details.
mantity	Unit	Materials, Supplies, Equipment or Services		Unit Price	Total Amour
50	EA.	28 Ft. (+/-) overall length fiberglass light poles for 25 mounting height per the attached specifications (see page 12 of 19).  SHAKESPEARE CAT. # BH28-9936BG21	Ft. +	327.42 1=REIGA	16,371 S
		PRICE PER EACH: \$ 327.42 (including freight)			

PROPOSAL OR BID In compliance with the above invitation for bids and subject to all conditions thereof, the undersigned offers and agrees, if this bid be accepted within a reasonal time from date of closing, to furnish any or all of the items or render such services upon which prices are quoted, in accordance with the specifications applying and at a price set opposite each item.

% cash discount if paid within\_

See instruction item No. 16 on reverse side hereof.

Delivery of any or all of the items or completion of services indicated shall be made within days from receipt of ordinary of an order, it is important that bidd furnish the information requested above.

Sign Here:

SHAKES PEARE - ELECTRONICS & F. beeg/ass &
Name of Company
RON CROMER THIS SALES Adminis Address P.O. Box 733 ~ NEW DEARY, S.C. 29/08

\_days from delivery and acceptance of goods or completion of service

## PROPOSAL AND BID SURETY FORM

PROPOSAL: .

In compliance with the foregoing invitation to bid and subject to all of the conditions thereof the undersigned offers and agrees, if this bid is accepted within a reasonable time from date of opening of bids, to enter into a contract in ac-

The Legal Advertisement, General Conditions, Instructions to Bidders, Information for Bidders, Special Conditions, Specifications, and Plans applying form a part of this proposal.

This proposal is supported by the following bid surety as required by law and aignatures affixed thereto constitute both a proposal and bid surety executed by the bidder.

#### BID SURETY (REQUIRED BY LAW):

BOND FORM: (USE THIS BOND FORM-NO ALTERNATE FORM OF BOND WILL BE CONSIDERED).

KNOW ALL MEN BY THESE PRESENTS, THAT we, the undersigned, are held and firmly bound unto the City of Fort Wayne, State of Indiana, in the sum of. to be paid on demand to said City of Fort Wayne, its successors and assigns for which payment well and truly to be

made, we hereby bind ourselves, our heirs, successors, executors, and administrators, jointly and severally firmly by The condition of this obligation is such that if the bid or proposal attached hereto and made a part hereof and submitted to the within named division of the City of Fort Wayne or its duly constituted agent, is accepted and a contract awarded to the undersigned bidder and the said bidder shall within ten (10) days after notice of said award enter into a contract with the said City of Fort Wayne, State of Indiana, and shall secure the performance of the same by bond or otherwise as may be required to the satisfaction of the City of Fort Wayne, Indiana then this obligation shall be null and void; otherwise to be in full force and effect. If a corporate surely is furnished, it is necessary BID CHECK (ALTERNATE FORM OF SURETY): that a certificate authorizing the authorney-in-fact Certified [ to sign the bond accompanying the same. Cashiers [ Check No. 68 \_ in the sum of \_ CARCLINA NATIONAL Dollars 5. C - Bank is herewith submitted and deposited in lieu of bond under the same terms and conditions as set forth in the above bond. Note: If Check is used as Bid Surety-Attach here. SIGNATURES (BID SURETY AND PROPOSAL): Wienedsed by: Signature of Person Authorized to Signature BIDDER OTHER PARTIES INTERESTED IN Title SALES AND THIS PROPOSAL PRINCIPAL (See 14-Signatures under General Conditons, etc.) List all Parties if Partnership Street Name and Number City, State and Zip Code Name of Company - Print or Tipe Witnessed by: Incorporated In the State of:.... SURETY Address

Ву.... Sign on this Line

Page _	18	of	19
Refere	nce	No.	<b>7</b> 50

### NON-COLLUSION AFFIDAVIT

SS:
COUNTY
The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting, nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, under-
standing or combination with any other person in reference to such bidding.
standing of combination with any other person in reference to such bigging.
He further says that no person or persons, firms, or corporation has, have or will receive directly or
indirectly, any rebate, fee, gift, commission or thing of value on account of such sale or contract.
Lonald W. Cromer
Sales administrator
For SHAKESPEARE
Subscribed and sworn to before me this 3/ day of May
My Commission Expires
$\bigcap \bigcap $
Dara Nell F. Jones

#### MBE/WBE STATEMENT

#### FOR CITY OF FORT WAYNE, INDIANA

BID NO. 750 BID DATE: 6-4-85

The City is committed to minority/women's business participation, and the Citizens' Advisory Committee is presently preparing an ordinance concerning minority and women's business participation for City contracts. This project is also governed by various affirmative action requirements including Presidential Executive Order Number 11246. To assist the City in meeting its stated goals and to further meet affirmative, action requirements, the undersigned commits N/A percent ( %), as a goal, of the undersigned's total bid to minority/women's business participation. In that regard, the following MBE and/or WBE firms have been contacted to work as subcontractors:

	Name of	FILM	Type of work
1. No	NE		
2.			
3.			
4.			
	Submitted	on:	MAY 30, 1985 , 1984
		Ву	SHAKES PEARE (Company Name)
			Todney TEptine MANAGER  (Name & Tiple of Gerson Anthorized to sign)
Business	Address:		SHAKESPEARE
			RFD #3 Hoy 76
			RFD #3 Noy 76 NEWBERRY, S.C. 29108
Phone Nu	umber:		803-276-5504

### CITY OF FORT WAYNE

FT. WAYNE, IND.

#### INVITATION

Quotations, subject to materials, supplies, eq	edpenent or pervice	s, for the depar	riment as me	entioned with	delivery	to don't	nation
as shown below. Quo indicated below.*	tations shall include	le all charges fo	or delivery.	packing, ste.	Address	Jons sei	ply as
Mail all replies and sorrespondence, etc. to Att. of	Carol Off	erle		DEPARTM	ENT	OF PL	RCH

HASES

ROOM 940, ONE MAIN STREET, FORT WAYNE, IN 46802 (219)427-1101

REQUIRED FOR DELIVERY TO:

Department or Division

STREET LIGHTING WAREHOUSE

1701 SOUTH LAFAYETTE ST.

FORT WAYNE, IN 46803 Address \_

RETURN ORIGINAL TO THE CITY - RETAIN DUPLICATE COPY FOR YOUR FILE

Closing

Time of Bids JUNE 4, 1985 at 10:00 a.m.

TAXES: THE CITY IS EXEMPT FROM PEDERAL EXCISE AND INDIANA STATE SALES TAX. THE CITY'S INDIANA SALES TAX EXEMPTION CERTIFICATE NUMBER IS NO. 84508. PRICES SHOULD NOT INCLUDE THESE TAXES. See "Instructions to Bidders" No. 10 on reverse hereof for details. TAY EXEMPT (Tipless otherwise indicated)

Quantity	Unit	Materials, Supplies, Equipment or Services	Unit Price	Tota Amos
50	EA.	28 Ft. (+/-) overall length fiberglass light poles for 25 Ft. + mounting height per the attached specifications (see pages 11-12 of 19).		
		Engineered Fibreglass Catalog #MD112-85-1-HS-PC-AR-BP		
		PRICING (See attached quotation for alternate bid)		
		PRICE PER EACH: \$ 217.37 (including freight)		
		TOTAL: \$ 10,868.50 (including freight)		
		DELIVERY TIME: 6-8 weeks ARO	William I	
		AFFIRMATIVE ACTION: On File Attached XXXXX		

							CA CAL ACCA			
Bid Bond	required	NO	YES	5%	Perform	mance Bond	XX	YES	NO	
Torme	0 0	anah	discount if m	See in	extraction item No. 16 on 1					

\_% cash discount if paid within \_\_\_\_\_days from delivery and acceptance of goods or completion of services

#### PROPOSAL OR BID

In compliance with the above invitation for bids and subject to all conditions thereof, the undersigned offers and agrees, if this bid be accepted within a reasonable time from date of closing, to furnish any or all of the items or render such services upon which prices are quoted, in accordance with the specifications applying and at the price set opposite each item.

Delivery of any or all of the items or completion of services indicated shall be made within Odays from receipt of order As delivery may be a deciding factor in the award of an order, it is important that bidder furnish the information requested above. IMPORTANT G

Sign Here:	
Engineered Fibreglass Products, I	nc.
Jim Myers Many of Company Sales Mgr	
P. 0. Box 815	

Estill, SC. 29918 6-5-85

Page 1 of 1

Ref. No. \_ 750

Date wanted

Fund

Date May 15, 1985

Appropriation No. .

#### ENGINEERED FIBREGLASS PRODUCTS, INC.

AFFILIATE OF G. A. PFLEIDERER. GMBH MANUFACTURERS - ENGINEERS ESTILL, SOUTH CAROLINA 29918

MAIL: POST OFFICE BOX 815 - FACTORY: 25 WOOD STREET - PHONE: (803) 625-3131

TO: City of Fort Wayne

Department of Purchases One Main St. Room 940 Fort Wayne, Indiana 46802 Date: June 5, 1985

Reference: 750

Gentlemen:

We are pleased to quote on your inquiry as follows:

fiberglass pole, color: light grey, Frt. 2\frac{1}{2}x5" handhole, pole cap, cable Total entrance holes, drilling and back plate for mast arm mounting.

\*\* 50 EFP Catalog #MDll2-85-1-H-PC-AR-BP, 28-1 foot \$220.04 ea. fiberglass pole, color: light grey, Frt. 11.31 ea. minimum 3x12" handhole, pole cap, Total \$231.35 ea. cable entrance holes, drilling and backing plate for mast arm mount.

\*\* This pole is approved by the Federal Highway Administration for breakaway Terms: Net 30 Days

F.O.B.: Estill, SC., prepaid and allowed, if freight included in price.

Delivery: 6-8 weeks ARO

We appreciate the opportunity to quote on your requirements, and look forward to the pleasure of serving you.

Very truly yours,

Jim Myers Sales Manager Pole Products

## FORT WAYNE SPEC - SPECIFICATIONS FOR FIBERGLASS LIGHT SUPPORTS

Second paragraph - "For appearance, the deflection of the shaft shall be limited to 1 degree 10 minutes rotation . . ." Because of your limitation of top diameter (i.e., 4-1/2" O. D.), we cannot comply with the desired rotation requirement if we must consider an 8 foot long mast arm with a luminaire of 3.2 square/feet in 80 MPH wind with a 30 percent gust factor. Our angular rotation will be approximately 7 degrees as shown on attached calculations.

Further we doubt, due to the dimensional specification on diameter and the physical properties of fiberglass reinforced plastics, that any manufacturer can meet this requirement. However, due to our method of manufacture which includes layers of chopped strand mat and non-crossing of longitudinal filaments higher torsional displacement is of no consequence. This may or may not be true for manufacturing processes that wind continuous filaments in a helix around the pole axis as the sole source of fiber reinforcement.

Fourth paragraph - "A coating shall be applied to the shaft to maintain surface integrity against U. V. radiation, acid rain, road salts, and other sources of weathering." We manufacture our poles using the process of centrifugal casting. This process incorporates a hollow, polished, chrome plated mold in which the FRP shaft is cast with the aid of centrifugal force. Every shaft has at its surface a 20 mil surfacing veil which is highly impregnated with the pigmented and ultra-violet protected polyester resin. Because the mold is on the exterior of the pole, we get a shaft coming out of the mold with a very smooth finished surface. Because the surfacing veil is on the surface of the shaft, it shrouds the structural fibers with a tough weather, abrasion, and chip resistant skin which we believe is far superior to a thin secondary paint coat of perhaps 3 mils thickness. Fifteen years of experience using our technique of construction in Europe has yielded excellent results regarding weatherability. In summary, we do not feel it is necessary that our shaft receive a secondary coating to enhance weatherability.

8 9C mm

STATE OF INDIANA,

Page 18 of 19
Reference No. 750

### NON-COLLUSION AFFIDAVIT

COUNTY SS:		
member, representative, or agent of the firm, con- entered into any combination, collusion or agreed anyone at such letting, nor to prevent any person	sworn on oath, says that he has not, nor has any other npany, corporation or partnership represented by him, ment with any person relative to the price to be bid by from bidding nor to induce anyone to refrain from bide to any other bid and without any agreement, under-reference to such bidding.	
	ms, or corporation has, have or will receive directly or ling of value on account of such sale or contract.  Jim Myers Jam Myers	
	Sales Manager/ Engineered Fib	regla
	For Engineered Fibreglass Products,	Inc.
Subscribed and sworn to before me this5	th day of June 1985	
My Commission Expires	Cypethia C Long	

### ENGINEERED FIBREGLASS PRODUCTS, INC.

AFFILIATE OF G. A. PFLEIDERER, GMBH
MANUFACTURERS - ENGINEERS
ESTILL, SOUTH CAROLINA 29918

MAIL: POST OFFICE BOX 815 - FACTORY: 25 WOOD STREET - PHONE: (803) 625-3131

AFFIRMATIVE ACTION PROGRAM

The Company has an established Equal Opportunity policy (see Management Procedure No. HR 110,115 ) that reflects the intentions of the company in accordance with Title VII of the Civil Rights Act of the 1964 and all other statutes, regulations, and executive orders which deal with equal employment and nondiscrimination. This policy pledges that the company will make every good-faith effort to insure that no applicant or employee will suffer discrimination because of age, handicap, race, religion, color, sex or National origin in recruitment, hiring, compensation, training, advancement opportunities or any other aspect of employment. Further, the company will take affirmative action to see that this policy is implemented and is dissimilate internally and externally.

#### Specifically, the company will:

- Dissiminate its Equal Opportunity policy internally and externally by externally by:
  - a. Including the policy in the Human Resources Manual.
  - b. Publicizing Equal Employment Opportunity policy and related activities and picturing minority and nonminority men and women in inhouse publications.
  - c. Posting in conspicuous places throughout all company locations notices informing applicants and employees of their rights under Federal Equal Employment Opportunity Nondiscrimination Policy.
  - d. Discussing the policy at employee orientation, training sessions and in management meetings.
  - e. Including the phrase, "An Equal Opportunity Employer" in all employment advertising.
  - f. Taking every opportunity to notify educational institutions and community service groups of our policy.
- 2. Implement its Affirmative Action Program (with emphasis on the hiring, training and advancement of minorities, women, Viet Nam Veterans, and qualified handicapped individuals) by:
  - a. Establishing responsibilities for implementation of the program.

- b. Developing and reaffirming the company's Equal Opportunity policy in all personnel actions.
- c. Conducting a periodic work force utilization analysis to determine the availability of minorities and women having requisite skills, the availability of promotable and transferable minorities and women within the company, and the existence of training institutions capable of training persons (particularly minorities and women) in requisite skills.
- d. Identifying problem areas in the company by organizational units in job classification.
- e. Developing and executing programs designed to eliminate problems.
- f. Constantly reviewing the Salary Administration Program to assure that there is no desperate treatment regarding compensation.
- g. Actively supporting local and national community action programs and community service programs designed to improve the employment opportunities of minorities and women.

## PROPOSAL AND BID SURETY FORM

PROPOSAL:

In compliance with the foregoing invitation to bid and subject to all of the conditions thereof the undersigned offers and agrees. If this bid is accepted within a reasonable time from date of opening of bids, to enter into a contract in ac-

The Legal Advertisement, General Conditions, Instructions to Bidders, Information for Bidders, Special Conditions, Specifications, and Plans applying form a part of this proposal.

This proposal is supported by the following bid surety as required by law and aignatures affixed thereto constitute both a proposal and bid surety executed by the bidder.

BID	SURETY	(REQUIRED	BY	LAW):

BOND FORM: (USE THIS BOND FORM-NO ALTERNATE FORM OF BOND WILL BE CONSIDERED). KNOW ALL MEN BY THESE PRESENTS, THAT we, the undersigned, are held and firmly bound unto the City of Fort Wayne, State of Indiana, in the sum of\_ to be paid on demand to said City of Fort Wayne, its successors and assigns for which payment well and truly to be made, we hereby bind ourselves, our heirs, successors, executors, and administrators, jointly and severally firmly by The condition of this obligation is such that if the bid or proposal attached hereto and made a part hereof and submitted to the within named division of the City of Fort Wayne or its duly constituted agent, is accepted and a contract awarded to the undersigned bidder and the said bidder shall within ten (10) days after notice of said award enter into a contract with the said City of Fort Wayne, State of Indiana, and shall secure the performance of the same by bond or otherwise as may be required to the satisfaction of the City of Fort Wayne, Indiana then this obligation shall be null and void; otherwise to be in full force and effect. If a corporate surely is furnished, it is necessary BID CHECK (ALTERNATE FORM OF SURETY): that a certificate authorizing the "attorney-in-fact" Certified MONEY ORDER #63336 to sign the bond accompanying the same. Cashiers D Check No. .. in the sum of Five Hundred & Seventy Eight & The Exchange Bank Estill, SC. 29918 is herewith submitted and deposited in lieu of bond under the same terms and conditions as set forth in the above bond. - Bank SIGNATURES (BID SURETY AND PROPOSAL): Engineered Fibreglass Products, Witnessed by: By Jim Myers Signature of Person Authorized to Sign BIDDER Title Sales Manager OTHER PARTIES INTERESTED IN AND THIS PROPOSAL PRINCIPAL 25 Wood Street (P.O. Box 815) (See 14-Signatures under General Conditions, etc.) List all Parties if Partnership Street Name and Number Estill, SC. 29918 City, State and Zip Code

June 5, 1985 Name of Company - Print or Type Witnessed by: Incorporated In the State of: SURETY Sign on this Line

#### MBE/WBE STATEMENT

## FOR CITY OF FORT WAYNE, INDIANA

BID NO. 750 BID DATE: 6/5/85

Type of Work

Name of Firm

Phone Number:

Not Applicable to this type of pole 1. 2. 3. 4. Submitted on: 5th day of June . 1985 Engineered Fibreglass Products, Inc. By (Company Name) mules im Myers/Sales Manager (Name & Title of Person Authorized to sign) P.O. Box 815 Business Address: Estill, SC. 29918

(803) 625-3131

#### SPECIFICATIONS FOR FIBERGLASS LIGHT SUPPORTS

All components shall be furnished in accordance with the City of Fort Wayne Standards. All components shall meet the following Specifications and shall be interchangeable with existing stock components unless otherwise approved. Drawings, and required calculations to show quoted components comply with the Specifications, as well as a cross-sectional sample, shall be submitted to Street Light Engineering prior to or with quotation.

The shaft shall be designed to safely support a 48 pound luminaire with an E.P.A. of 3.2 square feet when mounted on a maximum length single member mast arm; as detailed in the Fort Wayne Standards, and subjected to an isotach value of 80 mph and a gust velocity of 104 mph using a minimum 1.8 factor of safety based upon the yeild strength of the materials for maximum combined stresses. The supports shall be designed to handle first and second mode vibrations. For appearance, the deflection of the shaft shall be limited to 1 degree 10 minutes rotation or angular deflection of the shaft top when the shaft is subjected to the dead weight bending moment of the arm with the luminaire and a 3 conductor #4 aluminum wire service drop with maximum span length of 200 feet.

The shaft top O.D. shall be designed at 4 1/2 inches to accomodate the City's Standard single member mast arm. Shaft drillings for the mast arm attachement shall be centered 6 inches from the top of the shaft. The drillings shall be (1) 9/16 inches diameter holes located vertically 2 5/8 inches above and below the center point and horizontally on a 3 3/8 inch arc at 86 degrees. The shaft shall be a one piece round tapered tube consisting of glass fibers, unsaturated resin, neutral fillers, priments and catalysts. The shaft shall be furnished with a 2 1/2" - 3" x 5" reinforced hand hole located 6 feet 6 inches above the bottom of the shaft and at 90 degrees to the mast arm drilling. An ornamental cap for the pole top shall

also be furnished. Stainless steel screws shall be furnished for the attachement of the hand hole cover and the cap. A 1 1/4 inch diameter wire hole with a 1 inch I.D. rubber grommet shall be incorporated in the shaft where the arm attaches. The shaft shall also incorporate (2) 1 1/4 inch entry holes with 1 inch I.D. rubber gromment to accommodate underground wiring located on each side of the shaft and at 90 degrees to the mast arm. The shaft shall be designed to prevent rotation in the soil.

The surface of the pole shall be of uniform smoothness and free from defects for the entire length of the shaft. The shaft shall be "aluminum" in color and shall be of uniform color throughout the entire thickness of the shaft. A coating shall be applied to the shaft to maintain surface integrity against U.V. radiation, acid rain, road salts and other sources of weathering.

The shaft shall be flame retardant in accordance with A.S.T.M. D 635.

The shaft shall be warrantied for 3 years from the date of purchase to be free from defects in materials and workmanship when used under normal conditions encountered in roadway lighting applications.

Minor changes shall be allowed in the specifications prior to bid when requested in writing and deemed appropriate by the Street Lighting Engineer.

## City of Fort Clayne

## MD112-85 W/ 8 fst. arm

Overall length

Height above ground = 28' 1"

Luminoire mounting height = 25' 10"

Arm length = 8 ft.

Fixture ws. = 14.5 165.

Fixture ws. = 48 165.

E.P.M. (luminoire and arm) = 6.7 ft.

Static Deflection = 117.66 mm = 4.63"

= 0° 56' 10.86" = 0.93635°

= 1.6%

Deflection at 35 mph (x1.3 gust factor = 46 mph ultimate) = 300.7 mm

= 11 9"

For 80 mph wind (x1.3 gust factor = 104 mph 44timate)

Maximum Stress = 15,963 psi

Ultimate Stress = 45,000 psi

Safety Factor = 2.8

Angular Deflection = 7°18'29.11"

```
EFP CAT NO=CITY OF FORT WAYNE, MD 112 - 8.5
  WIND VELOCITY= 80mph EPA= 6.7sq ft
  TEST LOAD=0 1bs
  COEFFICIENT OF DRAG= 1 STATIC MOMENT= 423ft*1bs
****************
X=Omm STRESS= 11775.1psi
DEFLECTION=Omm STATIC DEFLECTION=Omm
   PCS GLASS= 2 WINDINGS= 2.61526
X= 400mm STRESS= 11116.4psi
DEFLECTION= 3.72982mm STATIC DEFLECTION= .188541mm
   PCS GLASS= 2 WINDINGS= 2.70715
         STRESS= 10483.1psi
DEFLECTION= 12.9536mm STATIC DEFLECTION= .67146mm
   PCS GLASS= 2 WINDINGS= 2.80272
X= 1200mm STRESS= 9871.53msi
DEFLECTION= 27.5224mm STATIC DEFLECTION= 1.46781mm
   PCS GLASS= 2 WINDINGS= 2.90285
X= 1600mm STRESS= 9278.58psi
DEFLECTION= 47.2884mm STATIC DEFLECTION= 2.59876mm
   PCS GLASS= 2 WINDINGS= 3.00855
X= 2000mm
           STRESS= 8701.51psi
DEFLECTION= 72.104mm STATIC DEFLECTION= 4.08792mm
   PCS GLASS= 2 WINDINGS= 3.12089 Max Stress
          STRESS= 15963.3psi -
DEFLECTION= 102.585mm STATIC DEFLECTION= 6.02719mm
   PCS GLASS= 1 WINDINGS= 1,60078
X= 2800mm STRESS= 14848.8psi
                      STATIC DEFLECTION= 8.6523mm
DEFLECTION= 140.818mm
                WINDINGS= 1.66402
   PCS GLASS= 1
X= 3200mm STRESS= 13760.4psi
DEFLECTION= 188.035mm STATIC DEFLECTION= 12.1532mm
   PCS GLASS= 1 WINDINGS= 1.73181
           STRESS= 12695.2psi
X = 3600 \text{mm}
DEFLECTION= 243.902mm STATIC DEFLECTION= 16.6014mm
   PCS GLASS= 1 WINDINGS= 1.80489
X= 4000mm STRESS= 11649psi
DEFLECTION= 308.068mm STATIC DEFLECTION= 22.0782mm
   PCS GLASS= 1 WINDINGS= 1.88414
X= 4400mm STRESS= 10618.3psi
DEFLECTION= 380.17mm STATIC DEFLECTION= 28.6758mm
   PCS GLASS= 1 WINDINGS= 1.97055
           STRESS= 9599.35psi
X= 4800mm
DEFLECTION= 459.819mm STATIC DEFLECTION= 36.5001mm
   PCS GLASS= 1 WINDINGS= 2.06522
          STRESS= 8587.97psi
X= 5200mm
DEFLECTION= 546.602mm STATIC DEFLECTION= 45.6726mm
   PCS GLASS= 1 WINDINGS= 2.16956
X= 5600mm STRESS= 7579.29psi
DEFLECTION= 640.068mm STATIC DEFLECTION= 56.3344mm
   PCS GLASS= 1
                 WINDINGS= 2.28519
           STRESS= 6567.31psi
X= 6000mm
DEFLECTION= 739.721mm
                     STATIC DEFLECTION= 68.6503mm
   PCS GLASS= 1 WINDINGS= 2.41413
           STRESS= 5544.59psi
DEFLECTION= 845.007mm STATIC DEFLECTION= 82.8145mm
                 WINDINGS= 2.55887
   PCS GLASS= 1
           STRESS= 4501.43psi
X= 6800mm
DEFLECTION= 955.298mm STATIC DEFLECTION= 99.0583mm
   PCS GLASS= 1 WINDINGS= 2.72266
X= 7200mm STRESS= 3425.16psi
DEFLECTION= 1069.86mm STATIC DEFLECTION= 117.66mm = 4.6" = 1.6 %
   PCS GLASS= 1 WINDINGS= 2.90962
```

Development of Torque on Pole

P = 0.19275 16s/in = 27.75 16s/ft2, Pressure due to
104 man wind, (80 x 1.3)

F: PxA= (27.75 /65/ff2)(6.7f2) = 185.9652 lba 2 186 lba

Assume centroid of area for arm is 13 arm length and centroid of area for fixture is 15" from arm.

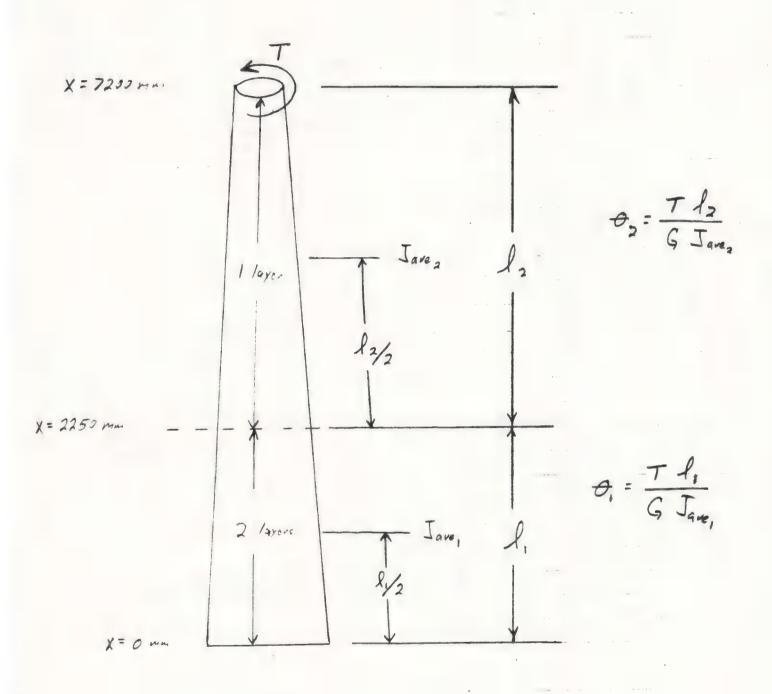
¢ = X	<b>⇒</b>	A (42)	1x	IXA	700
- area	Arm	3,5	8/3	9.3	N= 5 = 5,806 Rt
•	Fixture	3,2	8+15/12	29.6	= 5.8 Lt
	8	6.7/42		38,9 43	

T = Force X Dist., F = 186 165 0 = 5.8 ft.

T = (186)(5.8) = 1078.8 H·lba = 12,945.6 in · Ba

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A = 0, + 02

# J= 7 (d. 4-d. 4)

X = 0 mm  $A_0 = 24/.6 \text{ mm} = 9.5/2'', R = 244.6 = 120.8$  (2 pieces glass)  $A = R \cdot \sum R^2 - 51.6 \times GL \times THAT / 2 = 51.27 \text{ mm}$  $A = 120.8 - \sum 120.8^2 \cdot 2 \times 990 \times 1.27 \text{ mm}$ 

1 = 3,260 mm

 $d_1: 241.6 - 2(3.360) = 234.880m = 9.247''$   $J = II \int 9.5/2^{4} 9.247^{47} = 85.888 i 4$ 

X=2250 mm, do = (7200 - 2750)(0.018) + 1/2 = 201.1 mm = 7.917", P = 201.1=100.5: (2 pieces glass)

x= 133,55 - [100.55 2. 2×990×1,37] = 4.062 mm

d: = 201.1 - 2 (4.062) = 192.976 mm = 7.597"

J= 7,9174-7.59747 = 58.678 in4

 $X = 2350 \, \text{mm}, \quad d_0 = 201.1 \, \text{mm} = 7.917'' \quad , R = 100.55 \, \text{mm}$   $A = 100.55 - 100.55^2 - \frac{1 \times 990 \times 1.27}{\Pi} \frac{1}{2}$   $A = 2.010 \, \text{mm}$   $A_1 = 201.1 - 2(2.010) = 197.08 \, \text{mm} = 7.759''$   $S = \frac{7}{52}(7.917^4 - 7.759^4) = 29.880 \, \text{m}^4$   $V = 3200 \, \text{m} = 100.55 \, \text{m}$ 

X = 7200 mm, do : 1/2mm = 4.409", R = 56mm = 2.205" (1 piece gloss) di = 104.61 mm = 4.119"

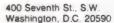
J= 8.839 = 4

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#### MAY 4 1984

REFER TO: HNG-21

Kenneth H. Wechsler, P.E.
President, Engineered Fibreglass
Products, Inc.
P.O. Box 815
Estill. South Carolina 29918

Dear Mr. Wechsler:

In your March 13 letter you requested acceptance, for use on Federalaid highway projects, of different sizes of fiberglass-reinforced plastic poles produced and distributed by your company. In support of your request you enclosed a Southwest Research Institute research report, "Impact Test of Direct Burial Fiberglass Pole."

As described in the report, the tested pole had an overall length of 34 feet 7 inches and weight of 145 pounds. It had a diameter at the bottom of 11.9 inches which tapered to a diameter of 4.4 inches at the top. The pole was embedded 5 feet in a type S-1 (strong) soil described in NCHRP Report 230. A 50-pound weight was attached at the end of a 6-foot mast arm at the top of the pole to simulate the weight of a lighting fixture. A 2250-pound pendulum mass fitted with a standard crushable nose impacted the pole 18 inches above grade at a speed of 20 m.p.h. The access door of the pole faced the striking pendulum.

The impact caused the wall nearest the pendulum mass to collapse and initiate fracture of the pole. The pendulum pitched downward as it continued in its movement and caused the upper portion of the pole to separate and be thrown away from the impact area. This test yielded an occupant compartment impact velocity of 13.72 ft./sec. with a 0.0g ridedown acceleration. An upper limit value of 15.7 ft./sec. occupant compartment impact velocity is implied in the 1975 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. Thus, the tested pole satisfied the acceptance criteria for breakaway poles.

From our discussions with you, and from your April 12 letter, we infer that several of your direct embedment poles that are weaker than the tested pole will also pass the pendulum crash-test when embedded in a soil approximating the strong test soil. The poles that are acceptable for use on Federal-aid highway projects if proposed by a State highway agency are those bearing the following catalogue numbers in the list you provided:

All LD, MD, and SD Series HD 94-70-0-H HD 94-90-0-H HD 94-105-0-H XHD 112-70-0-H XHD 112-90-0-H (Tested pole) XHD 112-105-0-H XXHD 121-70-0-H XXHD 121-90-0-H ED 94-70-0-H ED 94-90-0-H ED 94-105-0-H

Sincerely yours,

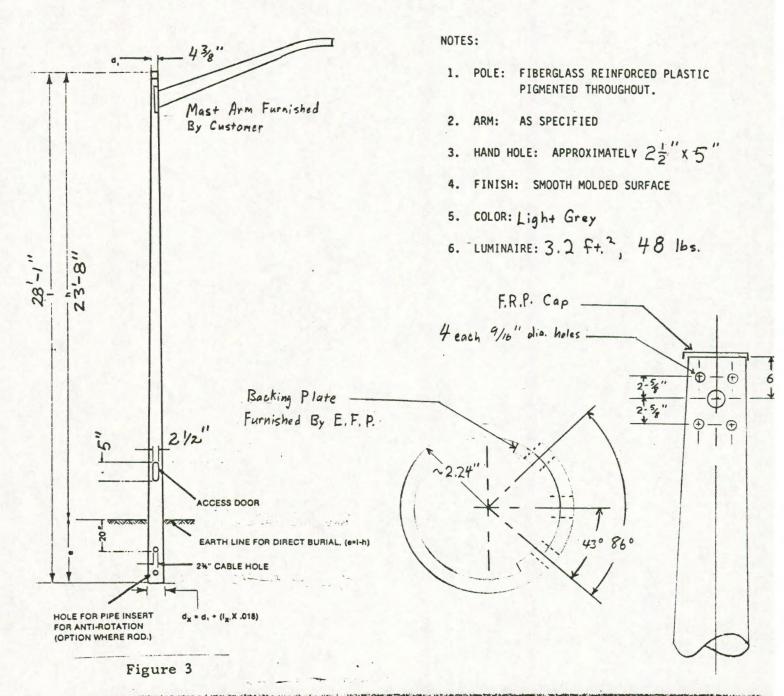
Ronald E. Heinz

Chief, Highway Design Division



## FIBERGLASS REINFORGED PLASTIC LICHTING POLES

#### MD112-85-1-45-PC-AR-BP





## ENGINEERED FIBREGLASS PRODUCTS, INC.

O Box 815 Estill S C 29916 Phone: 803-625-3131

#### DIGEST SHEET

TITLE OF ORDINANCE: SPECIAL

DEPARTMENT REQUESTING ORDINANCE: PURCHASING

1-85-06-43

SYNOPSIS OF ORDINANCE: An ordinance approving the awarding of a bid with respect to the purchase of fiberglass light poles for the Street Light Engineering Department.

EFFECT OF PASSAGE: These supports are needed for the installation of new street lights.

EFFECT OF NON-PASSAGE: Street lights cannot be installed.

MONEY INVOLVED (Direct costs, Expenditures, Savings): Engineered Fiberglass Products - \$11,567.50.

ASSIGNED TO COMMITTE (President):

WE, YOUR COMMITTEE (	ON CITT OTHER	TO WHOM WAS
REFERRED AN (ORDINAL	NCE) (RESOLVELON)	approving City Utilities
Purchase Order	#A-44712 by the City of	Fort Wayne, Indiana, by and
through its Dep	partment of Purchasing ar	nd Engineered Fiberglass
Products for th	ne. Street Light Engineeri	ng Department
(RESOLUTION)		
YES		<u>NO</u> :
Hem Hen	THOMAS C. HENRY CHAIRMAN	
~/	JANET G. BRADBURY	
000	VICE CHAIRWOMAN	
Wilmin	DONALD J. SCHMIDT	
Can the	JAMES S. STIER	
	CHARLES B. REDD	
CONCURRED IN 7	-9-81 <sup>-</sup>	SANDRA E. KENNEDY